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ISO14001  
ISO14001:2015



ISO9001  
ISO9001:2015



HANGCHA trucks conform  
to the European Safety  
Requirements.

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# XH SERIES HIGH-VOLTAGE LITHIUM BATTERY EMPTY CONTAINER HANDLER

with capacity of 9,000kg



INNOVATIVE LITHIUM-ION



HANGCHA

The World of Hangcha

# XH SERIES HIGH-VOLTAGE LITHIUM BATTERY EMPTY CONTAINER HANDLER

Independently developed by Hangcha on the basis of decades of deep understanding of electric products and internal combustion products, XH series high-voltage counterweight lithium battery empty container handlers are a new series of high-voltage lithium battery empty container handlers that first use a new energy vehicle voltage platform and represent a breakthrough over the traditional design concept. With improved efficiency, power, reliability, etc., XH series forklift models have performance and operating condition completely superseding that of the internal combustion forklifts.

VOLTAGE

**579 V**

SPEED MODELS

**3** S/P/E mode  
(Super/Power/Eco)

CHARGING TIME (20-100%)

**1.3Hour**

PROTECTION RATE

**IP67**

VEHICLE WATER RESISTANCE

**IPX4**

## Appearance

/ With the inherited exterior design of X series internal combustion empty container handlers and a smooth and sturdy profile, the whole vehicle is stylish, sturdy and powerful, showing modern industrial aesthetics.

THE *Plus*  
FOR YOUR  
BUSINESS





# FASTER & MORE EFFICIENCY.

Fast charging makes it possible for the whole vehicle to work continuously, shortening the waiting time and greatly improving efficiency.

Through disruptive battery and fast charging technology, the charging time is greatly shortened.

**4000** »   
CYCLES OF CHARGING      75% LI-ION

Under normal charging and discharging conditions, the lithium battery of Hangcha products has a capacity retention rate of more than 75% and a life span of up to 10 years after 4000 cycles of charging and discharging.

HIGH-VOLTAGE  
**350kWh**  
Battery capacity

# EFFICIENT AND DURABLE

## Advancement

- / A high-torque permanent magnet synchronous motor provides strong power for the vehicle with performance indicators benchmarked against that of internal combustion forklifts.
- / A 579V high-voltage platform with low system loss and a standard chilled water tank for heavy-duty truck to achieve good heat dissipation.
- / The vehicle has independently developed VCU program along with PDU+MCU+BMS+DC/DC to form a reliable and efficient drive system with flexible function configuration.
- / With motor, electric control and battery adopting liquid-cooling heat dissipation, the forklift can absolutely carry out long-time and high-intensity operations as internal combustion forklifts.

## Reliable

- / The novel spreader has a higher reliability, a longer service life, a lower failure rate and a lower maintenance cost.

## Ultra long battery life

- / A large-capacity lithium battery for the standard configuration can meet the long battery life need.
- / Both the drive and operating systems are efficient and energy-saving vehicle-grade permanent magnet synchronization systems.
- / High-voltage platform, less vehicle current and minimal system heat loss.
- / Braking energy and potential energy recovery effectively prolongs operating time.



## Safety

- / The cover of the vehicle is designed to be sealed to the water resistance level of IPX4.
- / The electrical system has high-voltage interlocking, insulation monitoring and potential balancing functions to offer vehicle-grade safety.
- / Both the battery and junction box have MSD(Manual Service Disconnect) maintenance switches to enable one-click power-down and safer maintenance.
- / Key structural parts have been verified highly reliable by the market for many years while being used by internal combustion forklifts.



All the motor and electronic controls reach the dust and water resistance level of IP67, a high protection level adequate to withstand harsh operating environments.



A turning deceleration function effectively reduces risk of tipping over.



The high-voltage lithium battery is equipped with an automatic fire extinguisher for the standard configuration. The vehicle is equipped with a pipe network automatic fire extinguisher for the standard configuration.

- / The spreader twist-lock equipped with mechanical and electrical protection devices, lifting interruption control, OPS system, travel speed limiting and other functions ensure safe operations.
- / The LED lighting system ensures the brightness of the lighting within the operating range.
- / A visual reversing radar is provided for the standard configuration and other options such as a tire pressure monitoring, overload protection, etc. can be provided.

## Fully-suspended all-round vision cab

- / The suspended cabin, easy for maintenance.
- / With the vehicle frame damper connected and the tight sound and heat insulation design, most vibration and noise are shielded.
- / The largely-curved front and rear windows, all-glass left and right doors and large glass ceiling enable a broad view.
- / An inclinable telescopic steering column and fully-suspended adjustable seat with a high backrest and safety belt, with seat sensing and driving position sensing functions.
- / A high-power cooling and heating air conditioner, two ventilation modes - internal and external circulation, sunshades, speedadjustable wipers and defrosting function make driving more comfortable.



# SMART AND CONVENIENT

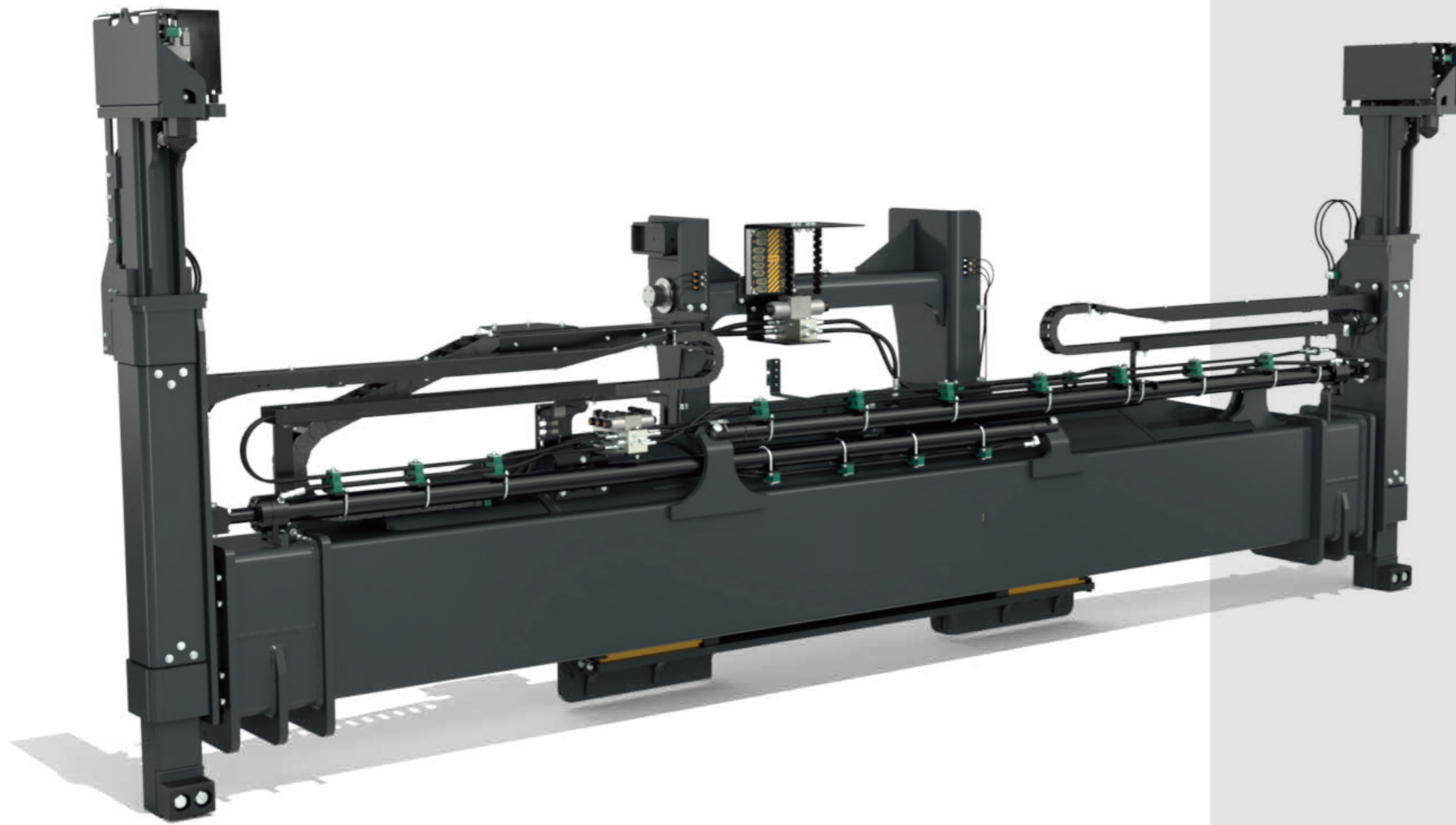
## Maintainability

- / The overturnable cab and electric tipping cylinder make tipping easier and more labor-saving.
- / The wide-opened hood and removable cover better facilitate repair and maintenance of electrical components.

## Intelligence

- / An optional intelligent management system is provided to enable intelligent remote monitoring and easier equipment management and logistics management.
- / A vehicle central controller is provided, which has bus architecture, several built-in diagnosis and management functions and a central fault alarm function.





## TECHNICAL SPECIFICATIONS

Type of lifting system	Two vertical twistlocks
Type of stacking	Normal and block stacking
Spreader weight (TW)	3 600 kgs
Carriage weight (MPS)	1 050 kgs
Lifting capacity (SWL)	9 tonnes
Telescopic positions	20 and 40ft
Telescoping speed, 20-40ft	< 12 sec.*
Telescoping speed, 40-20ft	< 14 sec.*
Sideshift	± 600 optional ± 400 mm
Mechanical pile slope (MPS), vertical floating end-posts	At 20ft position: approx. 200 mm At 40ft position: approx. 200 mm
Hydraulics, operating pressure up to	140 bar
Hydraulics, flow	40-60 L/min
Electric - control voltage	24 VDC
Communication	CAN 2.0B
Colour	Black grey RAL 7021

\* Calculated speed at 60 L/min

## Single handling container spreader Vertical Twistlocks.



Improved design with built-in cabling and larger bending radius for hydraulic hose between pocket and end-post.



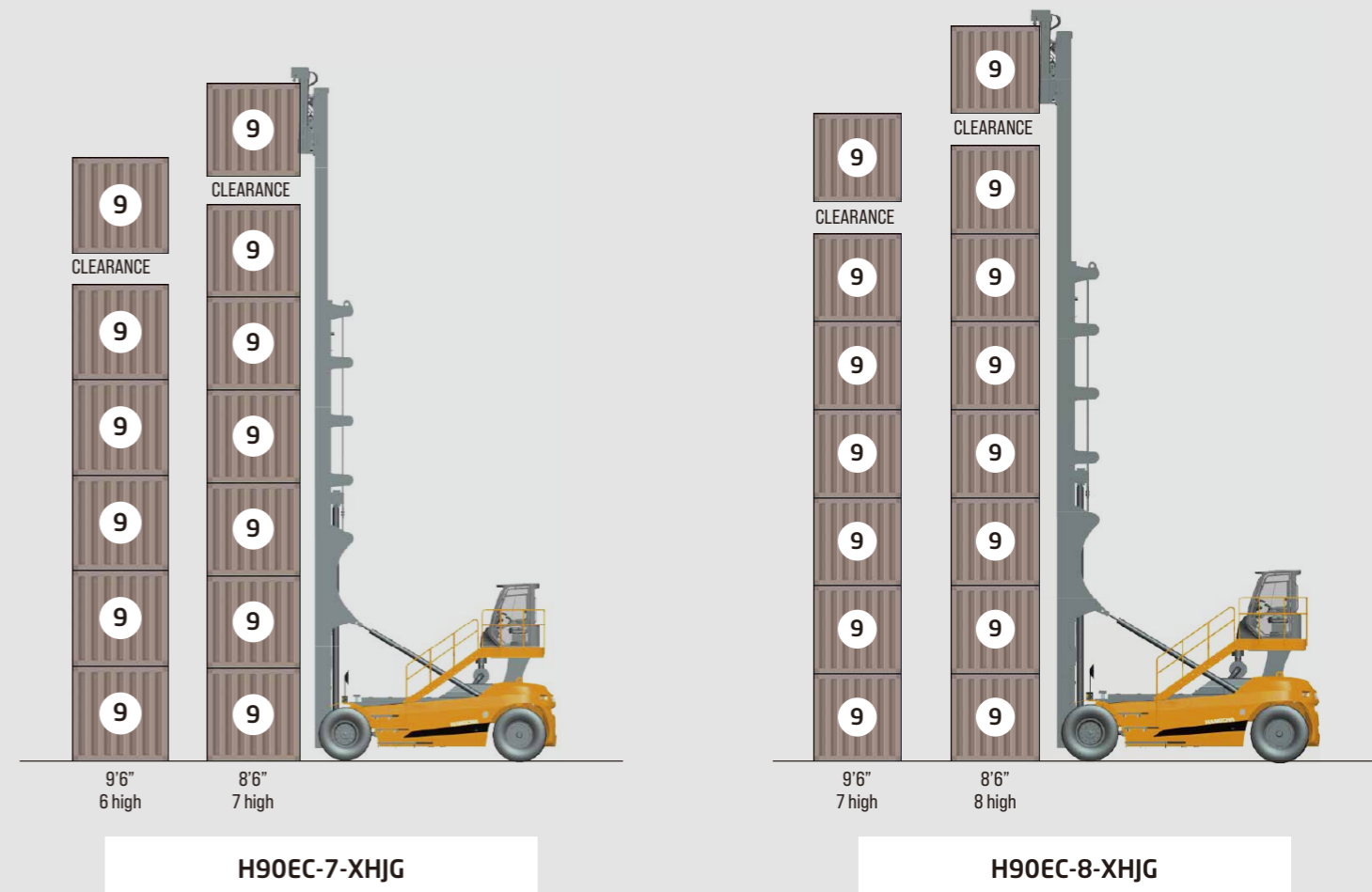
INNOVATION head.

### Suitable for:

- / 20' or 40' ISO containers of 8' (2.44 m) width.
- / Approx. 2.45-2.50 m wide "pallet-wide" 20' or 40' containers, with ISO-like 'chamfered' corner castings.
- / With speed limitation for laden/unladen.

### Not suitable for:

- / Approx. 2.45 - 2.60 m wide "CPC" containers (Cellular Pallet-wide Containers) with non-ISO corner castings.
- / Approx. 2.45 - 2.50 m wide "pallet-wide" 20' or 40' containers, with ISO-like 'chamfered' corner castings.



H90EC-7-XHJG

H90EC-8-XHJG



## Standard Specification

- / Duplex mast
- / Standard lifting height
- / Spreader & twistlock double protection
- / Emergency descent
- / Twistlock counter
- / 2 x Spreader twistlock light
- / Standard color
- / Vehicle toolkit
- / Pneumatic tyre
- / Fully hydraulic power steering
- / Tow pin
- / Rear-view mirror on right & left mudguards
- / Integrated joystick
- / Adjustable steering column
- / Adjustable armrest
- / Variable hydraulic pump system
- / Operation proportion control
- / Operator Presense System (OPS) with buzzer
- / LCD display screen
- / Main power switch
- / Emergency power off switch
- / Maintenance-free 24V lead acid battery
- / Reverse buzzer
- / High decible horn
- / LED lights (entire vehicle)
- / 2 x Working light on front mudguard
- / 2 x Front working light on top of cabin
- / 2 x Rear working light on top of cabin
- / 2 x Working light on both sides of mast
- / Reverse sensor
- / Rearview camera system
- / Weight indicator in display
- / Flashing warning light (non rotating) with control switch
- / On-board diagnostics system
- / Water cooling system for lithium battery
- / Automatic fire suppression system
- / Automatic fire suppression system for lithium battery pack
- / Manual Service Disconnect (MSD) switch
- / High voltage interlock
- / Insulation protection
- / Power-on self-test
- / Energy recovery (braking regeneration)
- / Energy recovery (descent regeneration)
- / Vehicle Control Unit (VCU)
- / Dual charging ports
- / Override switch
- / Hour meter
- / Battery charge indicator
- / Low hydraulic pressure alarm indicator
- / Hydraulic oil filter warning indicator
- / Drive mode indicator
- / Parking brake indicator
- / Service indicator
- / Cabin
- / Climate control system (air-conditioning and heater)
- / Radio
- / Sunshade
- / USB charging interface
- / Clothes hanger hook
- / Reading light
- / Fan
- / Mast automatic vertical realignment
- / Lifting height indicator on display

## Options

- / Optional lifting height
- / User defined colour
- / Fire extinguisher (2kg/4kg)
- / Solid tyre
- / Centralized lubrication system (machine)
- / Electrostatic discharge chain
- / Rearview camera system with memory
- / Front & rearview camera system
- / Front & rearview camera system with memory
- / 4 directions camera system with single display
- / 4 directions camera recording system with single display
- / In cabin CCTV
- / Rear blue safety light
- / Front and rear blue safety light
- / Three sided blue danger zone light
- / Overspeed alarm
- / Speed limitation
- / Voice reverse alarm
- / Two-way radio
- / Tyre pressure monitoring
- / Turning deceleration
- / 1x 24V power supply
- / 1x 12V power supply
- / License plate frame
- / Dynamic speed Limit depending of lift height( customer defined)

